



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/630,989	07/28/2003	Sudhir Gondhalekar	A7728/T48810	7726

57385 7590 01/09/2006

TOWNSEND AND TOWNSEND AND CREW LLP / AMAT
TWO EMBARCADERO CENTER
EIGHTH FLOOR
SAN FRANCISCO, CA 94111-3834

EXAMINER

DHINGRA, RAKESH KUMAR

ART UNIT	PAPER NUMBER
----------	--------------

1763

DATE MAILED: 01/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Advisory Action Before the Filing of an Appeal Brief	Application No. 10/630,989	Applicant(s) GONDHALEKAR ET AL.	
	Examiner Rakesh K. Dhingra	Art Unit 1763	

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 16 December 2005 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a) ☒ The period for reply expires 03 months from the mailing date of the final rejection.
 b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. ☐ The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. ☐ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because
- (a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);
 (b) ☐ They raise the issue of new matter (see NOTE below);
 (c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
 (d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: _____. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).
 5. ☐ Applicant's reply has overcome the following rejection(s): _____.
 6. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
 7. ☐ For purposes of appeal, the proposed amendment(s): a) ☐ will not be entered, or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.
 The status of the claim(s) is (or will be) as follows:
 Claim(s) allowed: _____.
 Claim(s) objected to: _____.
 Claim(s) rejected: _____.
 Claim(s) withdrawn from consideration: _____.

AFFIDAVIT OR OTHER EVIDENCE

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).
 9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing of good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).
 10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because:
See Continuation sheet.
 12. ☐ Note the attached Information Disclosure Statement(s). (PTO/SB/08 or PTO-1449) Paper No(s). _____.
 13. ☐ Other: _____.


PARVIZ HASSANZADEH
SUPERVISORY PATENT EXAMINER


 Rakesh K Dhingra

Response to Arguments

Applicant's arguments filed 12/16/05 have been fully considered but they are not persuasive as explained below:

Claims 1, 4, 5, 8-10, 12

Applicant has contended that Yoshida et al, Sanders et al, and Vella do not teach or suggest " a heat shield -----and the gap between the heat shield and nozzle is smaller than a thickness of shield.

Examiner responds that Yoshida et al teach a heat shield for a nozzle that extends into a process chamber to introduce process gas into the chamber. Further, as per Sanders et al the gap between heat shield and nozzle can be optimized based on process parameters.

Regarding size of gap between heat shield and nozzle in Yoshida et al being significantly larger than thickness of heat shield, examiner responds that exact size of gap or its criticality is not disclosed, since the specification (Paragraph 33) merely states that "cross section of heat shield 100 desirably is slightly larger than the external cross-section of nozzle". Claim 1 recites that "gap between the heat shield and nozzle is smaller than a thickness of shield" for which Sanders et al teach that gap between heat shield and nozzle can be optimized based on process parameters.

Applicant has also contended that heat shield disclosed by Yoshida et al occupies larger volume within the limited confines of the processing chamber.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., size of gap) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

In response to applicant's argument that heat shield disclosed by Yoshida et al occupies a larger volume within the limited confines of semiconductor processing chamber, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

Examiner further responds that size of heat shield is not recited in the claim. Thus references by Sanders et al and Vella are readable on the claims as explained in the office action.

In response to applicant's argument that Sanders et al and Vella are non-analogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, both Sanders et al and Vella pertain to plasma generating equipments and in both cases thermal shields are being used. In Sanders et al the gap 40 is used for flowing of cooling gas, which is not excluded in the claim and as per his teaching the gap between heat shield and nozzle can be optimized based on process parameters. Vella teaches that size of heat shield can be determined based upon temperature in the plasma generating chamber. In the absence of any special criticality being attached to the gap size in the disclosure, it would have been obvious to combine the teaching of Sanders et al and Vella with Yoshida et al that the gap between heat shield and nozzle can be optimized and that thickness of heat shield can be determined based upon temperature in the plasma generating chamber.

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). In this case as explained above, in the absence of any special criticality being attached to the gap size in the disclosure, it would have been obvious to combine the teaching of Sanders et al and Vella with Yoshida et al that the gap between heat shield and nozzle can be optimized and that thickness of heat shield can be determined based upon temperature in the plasma generating chamber. Accordingly claims 1, 4, 5, 8-10, 12 still would be rejected.

Dependent Claims 2, 3, 11

In response to applicant's argument that Tsukune does not teach that gap between heat shield and nozzle is significantly larger (it should read " is significantly smaller") than thickness of heat shield, examiner responds that reference by Tsukune is used since Yoshida et al, Sanders et al and Yella do not teach material of heat shield and accordingly claims 2,3, 11 would also be rejected in view of reasons given above under claims 1, 4,5,8-10, 12.

Claims 6, 7

In response to applicant's argument that Narwankar et al does not teach gap between heat shield and nozzle and nozzle is significantly larger (it should read " is significantly smaller") than thickness of heat shield, examiner responds that reference by Narwankar et al is used since Yoshida et al, Sanders et al and Yella do not teach plurality of nozzles and accordingly claims 6, 7 would also be rejected in view of reasons given above under claims 1, 4,5,8-10, 12.

Claims 21-24

In response to applicant's argument that Whittaker does not teach gap between heat shield and nozzle and nozzle is significantly larger (it should read " is significantly smaller") than thickness of heat shield, examiner responds that reference by Whittaker is used since Yoshida et al, Sanders et al and Yella do not teach threaded connection between nozzle and heat shield, and heat shield being formed integrally with nozzle, and accordingly claims 21-24 would also be rejected in view of reasons given above under claims 1, 4,5,8-10, 12.